

REMARKS

The Office Action dated February 8, 2006, and the patents and publications cited therein have been carefully reviewed, and in view of the above changes and following remarks reconsideration and allowance of all the claims pending in the application are respectfully requested.

The Amendments To The Claims

Applicants have rewritten claims 16 and 30 to be independent claims and to include all of the limitations of their respective base claims and any intervening claims. Claims 10, 13, 24 and 27 have been rewritten in independent form and to include limitations that are based on their respective base claims and any intervening claims. Support for rewritten claims 10 and 24 can be found through the specification, for example, at paragraph 23, lines 6-10, and Figure 4. Support for rewritten claims 13 and 27 can be found in original claims 8, 13, 22 and 27.

Additionally, claims 17 and 28 have been amended to improve their respective forms in accordance with U.S. patent law. More specifically, claim 17 has been amended to now depend from rewritten claim 16, and claim 28 has been amended to now depend from rewritten claim 27.

Applicants have amended independent claims 1, 8 and 22 to respectively include the limitations of claims 2, 9 and 23 to better distinguish over the applied art. In particular, claims 1, 8 and 22 now each requires that at least one control field contains a first portion having a predetermined number of zeroes preceding a portion containing each transition of the control field, which precedes a second portion having the predetermined number of zeroes, and such that the control field is completely formed by the first portion, the portion containing each transition of the control field and the second portion. Claims 2, 9 and 23 have been accordingly canceled.

The Objection To Claim 28

Claim 28 stands objected-to because the Examiner indicates that claim 28 is a duplicate of claim 26.

As described above, Applicants have amended claim 28 to now depend from claim 27.

Consequently, Applicants respectfully request that the Examiner withdraw this objection.

The Rejection Under 35 U.S.C. § 102(b) Over Du

Claims 1, 8, 20, 22 and 33 stand rejected under 35 U.S.C. § 102(b) as anticipated by Du et al. (Du), U.S. Patent No. 6,108,152.

Each of independent claims 1, 8 and 22 have been amended to better distinguish over the applied art by now including limitations appearing in originally filed claims 2, 9 and 23, respectively. Because claims 2, 9 and 23 were rejected as unpatentable over Du in view of Abbott et al. (Abbott), the rejection of claims 1, 8, 20, 22 and 33 is addressed below in the discussion of the rejection based on Du in view of Abbott.

The Rejection Under 35 U.S.C. § 103(a) Over Du In View of Abbott

Claims 2, 4, 6, 7, 9, 12, 15, 18, 19, 21, 23, 25, 29, 32 and 34-36 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Du in view of Abbott et al. (Abbott), U.S. Patent No. 5,422,760.

Applicants have amended independent claims 1, 8 and 22 to respectively include the limitations of claims 2, 9 and 23, and claims 2, 9 and 23 have been canceled. Consequently, Applicants will also include a discussion of claims 1, 8, 20, 22 and 33 in order to address this rejection.

Applicants respectfully submit that the present invention according to any of claims 1, 4, 6, 7, 8, 12, 15, 18, 19, 21, 23, 25, 29 and 33-36 is patentable over Du in view of Abbott. Applicants respectfully submit that the applied patents are not properly combinable to form a basis for rejection of these claims. Further, the device and method resulting from the proffered combination is not the claimed invention.

Contrary to the Examiner's statement, there simply is no suggestion in either Du or Abbott "to modify the medium as disclosed by Du et al. with the above teachings of Abbott et al. the motivation being to decrease false detection in the decoding process (as taught by Abbott et al., col. 43, lines 51-53.)." (See Office Action dated 02/08/2006, page 3, line 24, through page 4,

line 2.) While Du and Abbott may both be concerned with increasing the probability that the sync field will be successfully decoded, Applicants respectfully submit that Du and Abbott actually teach away from each other in this regard and, therefore, cannot provide a proper suggestion for the Examiner's proffered combination.

Du discloses in connection with the waveform shown in Figure 5-1 that the primary and secondary sync words comprise different patterns so that the receipt of each can be independently discerned. (See Du, column 16, lines 2-5.) Accordingly, the Examiner has not explained how to use the sync waveform disclosed in Figure 42-A of Abbott as the primary and secondary sync words of the waveform shown in Figure 5-1 of Du so that the primary and secondary sync words of Du are different patterns. Applicants respectfully submit that if the primary and secondary sync words were the same by using the Abbott waveform of Figure 42-A, as the Examiner suggests, then Du would not be able to assure that the receipt of each sync word could be independently discerned, which is plainly contrary to the disclosure of Du. (See Du, column 16, lines 2-5.)

Du discloses in connection with the waveform shown in Figure 8-1 that "[i]t has been found advantageous to select a sync word with a moderate number of flux reversals (that is, without either high or low frequency components)." (See Du, column 19, line 66, through column 20, line 1.) Applicants note that the waveform shown in Figure 42-A of Abbott is contrary to that disclosed by Du by not having a moderate number of flux reversals. (See Figure 42-A of Abbott.)

Thus, Applicants respectfully submit that not only is there no suggestion in either Du or Abbott for the Examiner's proffered combination, Du actually teaches away from Abbott. Accordingly, Applicants respectfully submit that the proffered combination of Du and Abbott is formed by impermissible hindsight because neither Du nor Abbott suggest the proffered combination. Even if the proffered combination of Du and Abbott is formed, the resulting device and method is not the present invention according to any of claims 1, 4, 6, 7, 8, 12, 15, 18, 19, 21, 23, 25, 29 and 33-36.

Regarding amended claim 1, Applicants respectfully submit that neither Du nor Abbott disclose the claimed control field containing a first portion having a predetermined number of zeroes preceding a portion containing each transition of the control field, which precedes a second portion having the predetermined number of zeroes, such that the control field is completely formed by the first portion, the portion containing each transition of the control field and the second portion. Regarding Du, the Examiner admits that Du does not disclose the claimed control field. (See Office Action dated February 8, 2006, page 3, lines 19-22.) Regarding Abbott, Applicant respectfully submits that the sync field disclosed by Abbott in Figures 42-A, 42-B and 43 includes a first flux transition A-A', an intermediate flux transition B-B', and a third flux transition C-C'. Figure 43 of Abbott, in particular, provides a tabulation of the different patterns that may occur when detecting the sync field of Figures 42-A and 42-B. Accordingly, the Abbott sync field does not contain a first portion having a predetermined number of zeroes preceding a portion containing each transition of the control field, which precedes a second portion having the predetermined number of zeroes, such that the control field is completely formed by the first portion, the portion containing each transition of the control field and the second portion. Instead, the Abbott sync field is completely formed by a first portion having a first flux transition A-A', a second portion containing a predetermined number of zeros preceding a third portion containing an intermediate flux transition B-B', which precedes a fourth portion having a predetermined number of zeroes and a fifth portion having a third flux transition C-C'.

Thus, amended claim 1 is allowable over Du in view of Abbott. It follows that claims 4, 6 and 7, which each incorporate the limitations of amended claim 1, are each allowable for at least the same reasons that amended claim 1 is considered allowable.

Regarding amended claim 8, Applicants respectfully submit that amended claim 8 is allowable over Du in view of Abbott for reasons that are similar to the reasons that amended claim 1 is considered allowable. In particular, Applicants respectfully submit that neither Du nor Abbott disclose or suggest the claimed control field containing a first portion having a predetermined number of zeroes preceding a portion containing each transition of the control

field, which precedes a second portion having the predetermined number of zeroes, such that the control field is completely formed by the first portion, the portion containing each transition of the control field and the second portion.

Thus, amended claim 8 is allowable over Du in view of Abbott. It follows that claims 12, 15, 18, 19 and 21, which each incorporate the limitations of amended claim 8, are each allowable over Du in view of Abbott for at least the same reasons that amended claim 8 is considered allowable.

Regarding amended claim 22, Applicants respectfully submit that amended claim 22 is allowable over Du in view of Abbott for reasons that are similar to the reasons that amended claim 1 is considered allowable. In particular, Applicants respectfully submit that neither Du nor Abbott disclose or suggest the claimed control field containing a first portion having a predetermined number of zeroes preceding a portion containing each transition of the control field, which precedes a second portion having the predetermined number of zeroes, such that the control field is completely formed by the first portion, the portion containing each transition of the control field and the second portion.

Thus, amended claim 22 is allowable over Du in view of Abbott. It follows that claims 23, 25, 29 and 33-36, which each incorporate the limitations of amended claim 22, are each allowable over Du in view of Abbott for at least the same reasons that amended claim 22 is considered allowable.

Thus, Applicants respectfully submit that it is only by impermissible hindsight that the Examiner is able to reject claims 1, 4, 6, 7, 8, 12, 15, 18, 19, 21, 23, 25, 29 and 33-36 based on the combination of Du in view of Abbott. Neither Du nor Abbott provides a proper suggestion for combination, and even if they did, the device and method resulting from the proffered combination is simply not the claimed invention. It is only by the Applicants' disclosure that the Examiner can attempt to select particular features of Du and Abbott to make the rejection.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection and allow claims 1, 4, 6, 7, 8, 12, 15, 18, 19, 21, 23, 25, 29 and 33-36.

The Rejection Under 35 U.S.C. § 103(a) Over Du In View of Romano

Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Du in view of Romano et al. (Romano), U.S. Patent No. 5,576,910.

Applicants respectfully submit that the present invention according to claim 5 is patentable over Du in view of Romano. Applicants respectfully submit that Romano does not cure the deficiencies of Du and Abbott with respect to the Examiner's proffered motivation for combining Du and Abbott with respect to amended claim 1, the base claim of claim 5. Additionally, Applicants respectfully submit that Romano does not cure the deficiencies of the device resulting from the combination of Du and Abbott with respect to amended claim 1. In particular, Romano does not disclose or suggest the claimed control field containing a first portion having a predetermined number of zeroes preceding a portion containing each transition of the control field, which precedes a second portion having the predetermined number of zeroes, such that the control field is completely formed by the first portion, the portion containing each transition of the control field and the second portion.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection and allow claim 5.

Allowable Subject Matter

The Examiner has indicated that claims 3, 10, 11, 13, 14, 16, 17, 24, 27, 30 and 31 contain allowable subject matter. Applicants have rewritten claims 16 and 30 to be independent claims and to include all of the limitations of their respective base claims and any intervening claims. Claims 10, 13, 24 and 27 have been rewritten in independent form and to include limitations that are based on their respective base claims and any intervening claims. Support for rewritten claims 10 and 24 can be found through the specification, for example, at paragraph 23, lines 6-10, and Figure 4. Support for rewritten claims 13 and 27 can be found in original claims 8, 13, 22 and 27.

Thus, claims 10, 11, 13, 14, 16, 17, 24, 27, 30 and 31 should still contain subject matter that has been indicated to be allowable.

Applicants have not rewritten claim 3 in independent form, but respectfully submit that claim 3 should be allowable for at least the reasons that amended claim 1, the base claim of claim 3, is considered allowable and for the reason that the Examiner has indicated that claim 3 contains allowable subject matter.

CONCLUSION

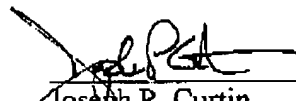
In view of the above amendments and arguments, it is urged that the present application is now in condition for allowance. Should the Examiner find that a telephonic or personal interview would expedite passage to issue of the present application, the Examiner is encouraged to contact the undersigned attorney at the telephone number indicated below.

A general authorization under 37 C.F.R. § 1.25(b), second sentence, is hereby given to credit or debit Deposit Account No. 09-0441 for the instant filing and for any other fees during the pendency of this application under 37 C.F.R. §§ 1.16, 1.17 and 1.18.

It is requested that this application be passed to issue with claims 1, 3-8, 10-22 and 24-36.

Respectfully submitted,

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